PLEASE RETURN BY:		CMB	No. 3145-0027: Approval Expires 12/31/200								
NOTICE - Your report to the Census Bureau is confidential by law (Title 13, U.S. Code). It may be seen only by sworn Census employees and may be used only for statistical purposes.	CENSUS USE ONLY	FORM RD-1 (12-21-98) U.S. DEPARTMENT O BUREAU COLLECTING AND COMPIL THE NATIONAL SCIENCE F SURVEY OF INDUSTRIAL RESEARCH AND DEVELOPMENT DURING 195									
The law also provides that copies retained in		In correspondence pertaining to this report refer									
your files are immune from legal process.	SURVEY CODE	to this CENSUS FILE NUMBER (11 digits)									
	4001										
RETURN Bureau of the Census											
TO 1201 East 10th Street Jeffersonville, IN 47132-0001	INDUSTRY CODE										
Name of person who supplied 1997 data	WEIGHT										
	Weight										
	STATE										
MANDATORY REPORTING REQUIREMENTS											
Data supplied in items 1A and 1B and in item 3A, line 3, columns 4 and 6, for 1998 on this form will satisfy the mandatory reporting requirements. (Title 13, U.S. Code.)	ADDRESS										
PLEASE READ ENCLOSED INSTRUCTIONS BEFORE COMPLETING THIS FORM.	SIC CODE										
		(Please correct any error in name and address, i	including ZIP Code.)								
		MESTIC ENTERPRISE, INCLUDING ALL U.S. SUBSIDIARIES AND DIVISIONS.	COVERAGE REVIEW								
·	•	fers to the consolidated domestic enterprise.	Was this company owned or controlled by another company on December 31, 1998?								
 Please complete this form by the date printed at the treturn it in the envelope provided. Make a copy for y 		 Report figures in thousands of dollars. Reasonable estimates are acceptable. 	1303☐ Yes – See instructions for								

- Please read the enclosed instructions before completing this form.
- Explain significant changes in year-to-year data in the remarks section.

Coverage Review.

1304 ☐ No - Continue with item 1

			Ş	section	ı I – Gi	ENERA	AL COMPANY DATA							
Item 1 - RECEIPTS AND EMPLOYMENT FOR THI	E COMP	ANY			Item 2 - NUMBER OF RESEARCH AND DEVELOPMENT SCIENTISTS AND ENGINEERS									
A. Net sales, operating receipts and revenues of							Apportion on a full-time equivalent basis. See page 4 of t	he instruction booklet for i	nore detail.					
domestic operations of this company (Report in thousands of dollars)		1997		1998				January 1998	January 1999					
EXCLUDE domestic intra-company transfers and	Bil.	Mil.	Thou.	Bil.	Mil.	Thou.]	00.120.7 7000						
sales by foreign subsidiaries.	101			102		1	1	Number	Number					
INCLUDE receipts for sales of products and services provided to other companies, individuals,								503	504					
U.S. Government agencies, and foreign countries.				1			A. Federal research and development		İ					
		Number	<u></u>	Number				505	506					
B. Domestic company employment in all activities	111			112			B. Company and other research and development							
during the pay period which includes the 12th of March 1998 (Item 1 of I.R.S. Form 941, if one								501	502					
Form 941 was filled for the entire company.)							C. TOTAL - Sum of lines 2A and 2B							

PLEASE CONTINUE ON REVERSE.

Item 3 - COSTS	INCURRED FOR RESEARC	H AND						1997									1998								
(Report in thousands of dollars)					deral fur	nds	Com	pany and (2)	other	other Total ((1)+(2)) (3)			Fe	deral fund (4)	ls	Comp	Company and other (5)			otal ((4)+(5))				
				Bil.	Mil.	Thou.	Bil.	Mil.	Thou.	Bil.	Mil.	Thou.	Bil.		Thou,	Bil.	Mil.	Thou.	Bil.	Mil.	Thou				
A. Performed within	n the company			301	17777	Tillou.	302	101111	11100.	303	143111.	Triou.	304	14111.	Tilou.	305	14111.	Tilou.	306	IVIII.	11100				
1. Basic research	1			,																ļ					
2. Applied research and	a. Applied research			311			312			313			314			315			316						
development	b. Development			321			322			323			324			325			326						
	c. Total – Sum of lines a a	nd b		331			332		:	333			334			335			336						
3. Total – Sum of lines 1 and 2.c.							342			343			344			345			346						
funds for researd others outside t	pany – Federal funds and co ch and development perforn he company within the Uni from 3A.3. above)	ned by	,	351			352			353			354			355			356						
development pe or other organiza	any funds for research and rformed by foreign subsidations outside the United SA.3. and 3B. above)	liaries Itates					362									365									
Federal (This lin research and dev	any and other funds, exce le represents company spons relopment with the exception Sum of 3A.3, B, and C, (colu	ored of					372									375									
Item 4 - COMPA BUDGE	NY AND OTHER FUNDS, I TED FOR THE YEAR 1999	XCEP1	FEDE	RAL, FO	R RESE	ARCH	AND D	EVELOP	MENT P	ERFOR	MED W	ITHIN T	HE CON	IPANY		Bil.	1999 Mil.	Thou.		I					
(Commonship to the	1000 5	04.0		451.3												401	14111.	i i i i i i i i i i i i i i i i i i i							
(Comparable to tr	ne 1998 figure reported in Ite				ID DE	VELOR	RAERIT	r DEDE	ORME	n witi	JIN TL	E DO	MECTI	COM	DANIV										
									Univie	2 000	HIIV III	IE DUI	1135111	COIVI	- All V	<u></u>									
Item 5 - COSTS WITHIN	INCURRED FOR FEDERAL THE COMPANY BY PRINC	RESEA	RCH A	ND DE	VELOPN	MENT PI	ERFOR	MED	Item	6 - CO	STS INC	URRED	FOR RES	E OF EXE	AND DI	EVELOP	MENT F	PERFOR	NED WIT	THIN TH	E				
	ported in Item 3A., line 3,								Allocat								4007		4000						
column (4), Federal funds, into the following		Key		1997			1998		Allocate the total reported in column (6), total company re				arch and	i .	Key		1997 (1)			1998 (2)					
	rando, into the leneving			(1)		1	(2)		developmen		Exclude	e iines 3t	3. and 30	d 3C.	6	Bil.	Mil.	Thou.	Bil.	Mil.	Thou.				
column (4), Federal principal agencies:	rando, mio tho following	code		(1)												DII.	IVIII.	Tilou.	DII.	10111.	11100				
	idinas, into the lenstring	code 5	Bil.	(1) Mil.	Thou.	Bil.	Mil.	Thou.	1 1//00	oc and a	alarine o							I .							
	taries, into the lone.		Bil.		Thou.	Bil.	Mil.	Thou.	pers		nclude s	cientists i	and engi	neers,	1 1										
principal agencies:	, , ,		Bil.		Thou.	Bil.	Mil.	Thou.	pers	onnel – I	nclude s		and engi	neers,	01										
principal agencies: 1. Department of Def	, , ,	5	Bil.		Thou.	Bil.	Mil.	Thou.	pers tech 2. Cost Do r and	onnel – i nicians, s of mat not includ other ma	nclude s secretarion erials and de in this aterials s	cientists a es, and o d supplie	and engi ther pers s consun nponents	neers, onnel. ned – , models,	01										
principal agencies: 1. Department of Def 2. National Aeronaut	ics and Space Administration	01 02	Bil.		Thou.	Bil.	Mil.	Thou.	pers tech 2. Cost Do r and orga	onnel – i nicians, s of mat not includ other ma inizations	nclude si secretarion erials and de in this aterials si s.	cientists des, and of d supplied item con	and engi ther pers s consun nponents	neers, onnel. ned – , models,	01										
principal agencies: 1. Department of Def 2. National Aeronaut 3. Department of End	iense ics and Space Administration ergy	01 02 03	Bil.		Thou.	Bil.	Mil.	Thou.	pers tech 2. Cost Do r and orga 3. R & 4. Other	onnel - i nicians, s of mate oot include other ma inizations D depre	nclude s secretarion erials and de in this aterials s s. ciation Include	cientists des, and of supplied item con upplied be service a	and engi ther pers s consun nponents by other r	neers, onnel. ned – , models, esearch	01 02 05										
principal agencies: 1. Department of Def 2. National Aeronaut 3. Department of Ene 4. Other Federal age	iense ics and Space Administration ergy	01 02	Bil.		Thou.	Bil.	Mil.	Thou.	pers tech 2. Cost Do r and orga 3. R & 4. Othe cost	onnel – inicians, is of material of include other mainizations. Discourse of the control of the	nclude si secretarion erials and de in this aterials si s. ciation Include are of ov	cientists des, and of supplied item con upplied be service a	and engi ther pers s consun nponents by other r	neers, onnel. ned – , models, esearch orting	01										

Section I - GENERAL COMPANY DATA - Continued

FORM **RD-1** (Item 7) (12-21-98)

SURVEY OF INDUSTRIAL RESEARCH AND DEVELOPMENT DURING 1998 U.S. DEPARTMENT OF COMMERCE BUREAU OF THE CENSUS COLLECTING AND COMPILING AGENT FOR THE NATIONAL SCIENCE FOUNDATION

Refer to this CENSUS FILE NUMBER in any correspondence pertaining to this report

Section II -- RESEARCH AND DEVELOPMENT PERFORMED WITHIN THE DOMESTIC COMPANY -- Continued

Item 7 — COST OF RESEARCH AND DEVELOPMENT PERFORMED WITHIN THE COMPANY BY STATE

Allocate the total reported in Item 3.A., line 3, columns (4) and (6), by the States in which your various research and development laboratories or facilities are located. Estimate the costs associated with each State. If necessary, you may report up to 10 percent of your total as "Not distributed by State."

		19	97	19	98				19	97	19	98		
Key code State	State	Federal funds	Total funds	Federal funds	Total funds	Key code	State	Feder	ral funds	Total funds	Federal funds	Total funds		
		(1)	(2)	(1)	(2)			(1)		(2)	(1)	(2)		
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05	CA	! !		1 1		31	NJ					· · · · · · · · · · · · · · · · · · ·		
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PLEASE CONTINUE ON REVERSE.

Section II — RESEA	MCH	AND	DEVE	LOPIVI	ENT P	ERFO	RMED	VIII III	N THE	DOME	STIC	COMPA	INY -	- Cont	inued					
Item 8 - ENERGY RESEARCH AND DEVELOPM	ENT P	ERFOR	MED V	NIHTIN	THE C	OMPAI	VY		-											
 Report expenditures for energy research and development type of energy sources. Include the project cost or portion 	by of I	1997								19	OS.			1		1999				
project cost incurred for the purpose of increasing energy resources or capabilities. These expenditures should be	,			13	, , ,					19	36			ļ					.1	
included in Item 3.A., line 3, columns (4) and (6).	Kev	Fe	Federal funds Federal funds								Т	otal fund	s		Projecte deral fu		Projected total funds			
Estimate expenditures for energy research by	code		(1)			(2)			(1)			(2)			(3)			(4)		
energy source for 1999.	10	Bil.	Mil.	Thou.	Bil.	Mil.	Thou.	Bil.	Mil.	Thou.	Bil.	Mil.	Thou.	Bil.	Mil.	Thou.	Bil.	Mil.	Thou.	
A. Nuclear	03			i .		1	i		1	i					i	1		i		
B. Fossil fuels	12		l	ı		1	I		1	1					1	<u> </u>		!	!	
C. Geothermal, solar, conservation and utilization	16		1	1		1	1		.l 	1		 			 	 - 		-	<u> </u>	
D. All other energy	17		i	i		Ī,	1]	i		<u> </u>			<u>.</u>	<u>i</u>		i .	1	
E. TOTAL - Sum of lines A through D	18		!	Ī		1	1		Ţ	Ţ		1 1			1	Ì		t	l	
Section III - RESEARCH A	ND D	DEVEL	OPME	NT PE	RFOR	MED (OUTSID	E THI	E DOM	ESTIC	COM	PANY V	VITH (COMP	ANY F	UNDS				
Item 9 – FOREIGN RESEARCH AND DEVELOPMENT B	Y COU	NTRY											Key		1997		1998			
Report the amount of total foreign research and develop			C., colui	nn (5), f	or the c	ountries	with the	larges	t expend	litures.			code				(2)			
If necessary, write in countries not listed. Report the bal	ance o	f foreig	n resear	ch and d	develop	ment or	i line 9.	_	·				12	Bil.	Mil.	Thou.	Bil.	Mil.	Thou.	
1. Canada													01		!	1		!	İ	
2. Germany													02	ļ —	 	1			1	
3. France												03		ı	ı		1	ı		
4. Japan													04		l	j			1	
5. United Kingdom															 	1		1		
6. Puerto Rico													06		1	I		1	ŀ	
7. Other — Specify													1,-		I	1		1	1	
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8. Other — Specify							-						08		1	1		1	!	
													—		† †	-		 	<u> </u>	
9. Balance not distributed										haran a			09	ļ	<u> </u>	<u> </u>			<u> </u>	
10. TOTAL - Sum of lines 1 through 9			-										10	<u> </u>	<u> </u>	<u> </u>	L	<u> </u>	<u> </u>	
Item 10 - COVERAGE AND OPERATIONAL STA Are research and development expenditures for the		-a dom	antia an	tararias	امرامط	lina aub	aidiariaa	ranar	tad on t	hic form	,									
				•	, metud	iiig sub	Sidialies	, repui	ted on ti	1115 101111	1									
1301 Yes 1302 No - Please explain in the								•												
Item 11 - CERTIFICATION - This report is substantially a Name of person to contact regarding this report	ccurate	and ha	s been p	repared	n accord	ance wit	n instruct	ions				····	Ar	ea code	Num	har		Extensi	on	
warne of person to contact regarding this report											Te	lephone		ea coue	Nun	ibei		LAIGHON	011	
Signature of authorized official			<u> </u>		Title										-	701 Date				
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